

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 11431991

Frame	: 213/5TC	Cooling method	: IC411 - TEFC
Insulation class	: F	Mounting	: F-1
Duty cycle	: Cont.(S1)	Rotation ¹	: Both (CW and CCW)
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line
Altitude	: 1000 m.a.s.l.	Approx. weight ³	: 87.4 kg
Protection degree	: IP56	Moment of inertia (J)	: 0.0636 kgm ²
Design	: B		

Output [HP]	10	7.5	7.5	7.5	10	10	10
Poles	4	4	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	460	380	400	415	380	400	415
Rated current [A]	12.4	11.2	11.0	10.9	15.0	14.2	13.8
L. R. Amperes [A]	79.4	75.0	78.1	81.7	76.5	79.5	82.8
LRC [A]	6.4x(Code H)	6.7x(Code H)	7.1x(Code J)	7.5x(Code K)	5.1x(Code G)	5.6x(Code G)	6.0x(Code H)
No load current [A]	5.65	5.60	6.00	6.35	5.60	6.00	6.35
Rated speed [RPM]	1765	1465	1470	1470	1450	1455	1460
Slip [%]	1.94	2.33	2.00	2.00	3.33	3.00	2.67
Rated torque [kgfm]	4.11	3.70	3.69	3.69	5.01	4.99	4.97
Locked rotor torque [%]	200	200	240	260	150	180	190
Breakdown torque [%]	295	300	340	360	220	250	270
Service factor	1.25	1.15	1.15	1.15	1.15	1.15	1.15
Temperature rise	80 K	80 K	80 K	80 K	80 K	80 K	80 K
Locked rotor time	30s (cold) 17s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)
Noise level ²	58.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)
Efficiency (%)	25%						
	50%	91.0	90.0	89.2	88.7	90.3	90.3
	75%	91.7	90.0	89.9	89.8	90.2	90.2
	100%	91.7	89.8	90.1	90.3	88.5	89.5
Power Factor	25%						
	50%	0.66	0.62	0.58	0.55	0.73	0.69
	75%	0.77	0.76	0.73	0.70	0.82	0.78
	100%	0.83	0.83	0.80	0.78	0.86	0.84

Losses at normative operating points (speed;torque), in percentage of rated output power

Losses (%)	P1 (0,9;1,0)	8.8	8.8	8.8	8.8	8.8	8.8
	P2 (0,5;1,0)	7.3	7.3	7.3	7.3	7.3	7.3
	P3 (0,25;1,0)	7.0	7.0	7.0	7.0	7.0	7.0
	P4 (0,9;0,5)	4.6	4.6	4.6	4.6	4.6	4.6
	P5 (0,5;0,5)	3.2	3.2	3.2	3.2	3.2	3.2
	P6 (0,5;0,25)	2.3	2.3	2.3	2.3	2.3	2.3
	P7 (0,25;0,25)	1.6	1.6	1.6	1.6	1.6	1.6

Bearing type	: 6308 C3	Non drive end	6207 C3	Foundation loads	
Sealing	: Inpro/Seal	Inpro/Seal		Max. traction	: 204 kgf
Lubrication interval	: 20000 h	20000 h		Max. compression	: 292 kgf
Lubricant amount	: 11 g	7 g			
Lubricant type	: Mobil Polyrex EM				

This revision replaces and cancel the previous one, which must be eliminated.
(1) Looking the motor from the shaft end.

These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.

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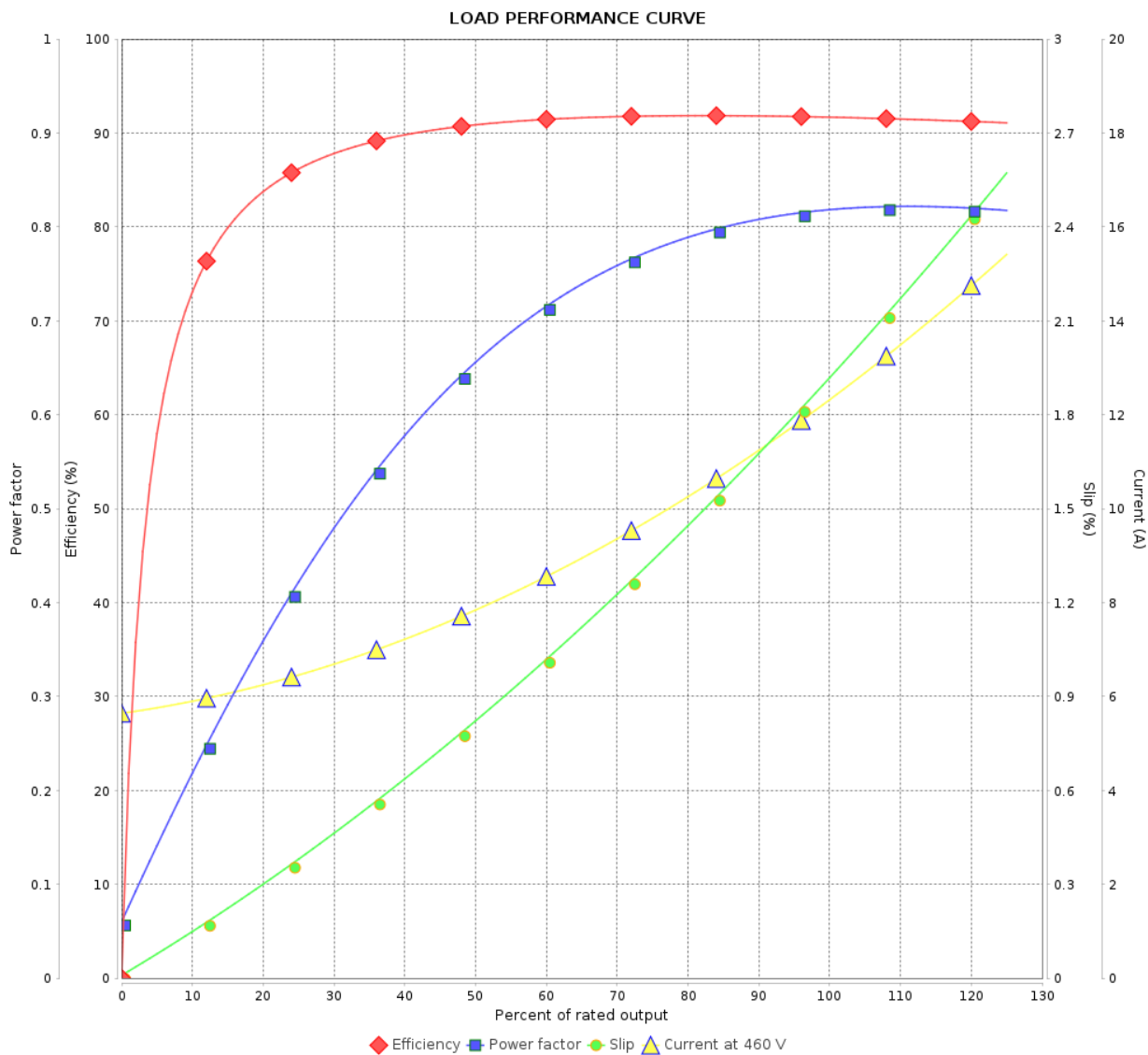
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium
Efficiency Three-Phase

Product code : 11431991



Performance : 460 V 60 Hz 4P

Rated current : 12.4 A
LRC : 6.4
Rated torque : 4.11 kgfm
Locked rotor torque : 200 %
Breakdown torque : 295 %
Rated speed : 1765 rpm

Moment of inertia (J) : 0.0636 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

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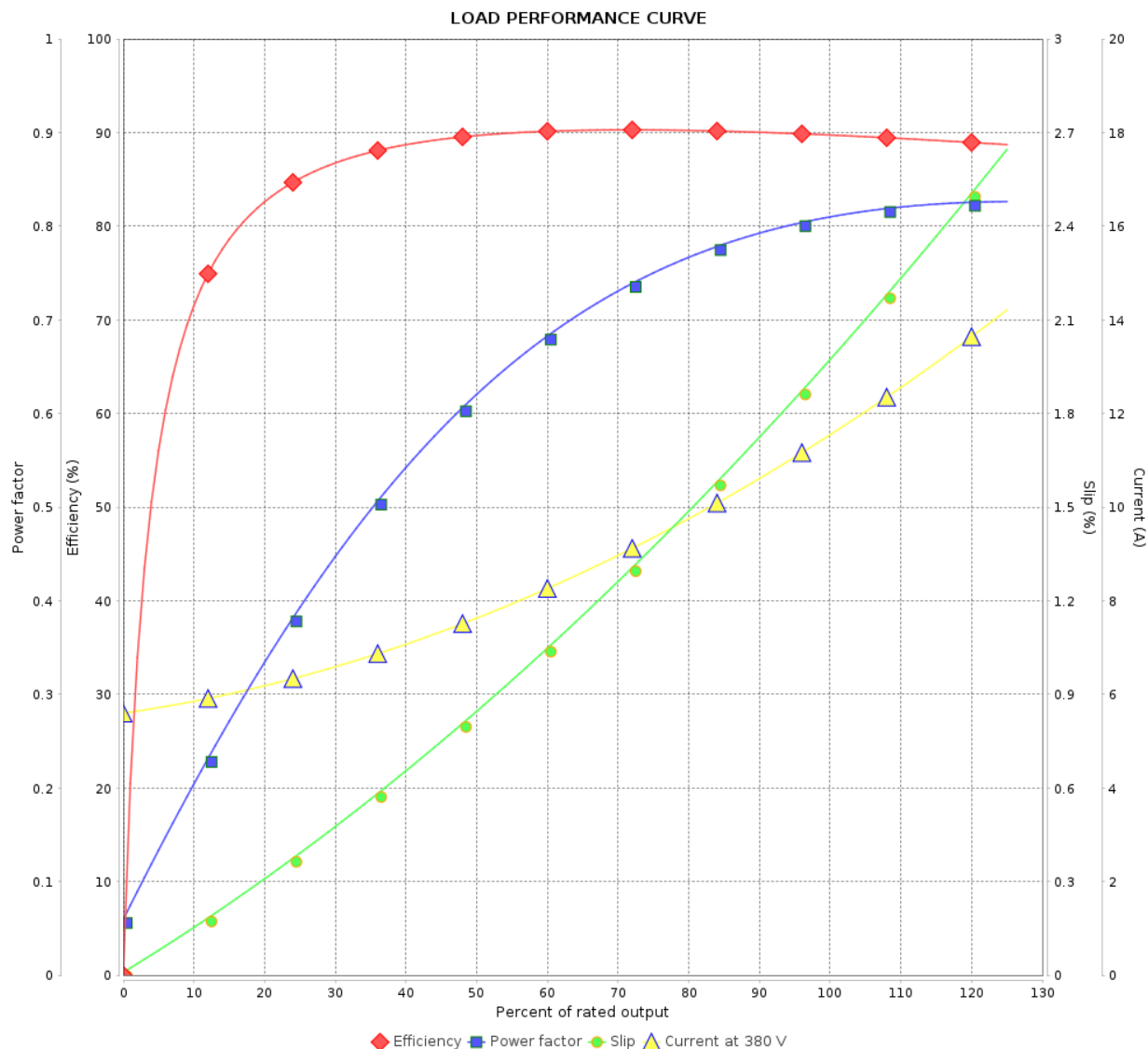
Three Phase Induction Motor - Squirrel Cage



Customer :

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Efficiency Three-Phase

Product code : 11431991



Performance : 380 V 50 Hz 4P IE3

Rated current : 11.2 A
LRC : 6.7
Rated torque : 3.70 kgfm
Locked rotor torque : 200 %
Breakdown torque : 300 %
Rated speed : 1465 rpm

Moment of inertia (J) : 0.0636 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

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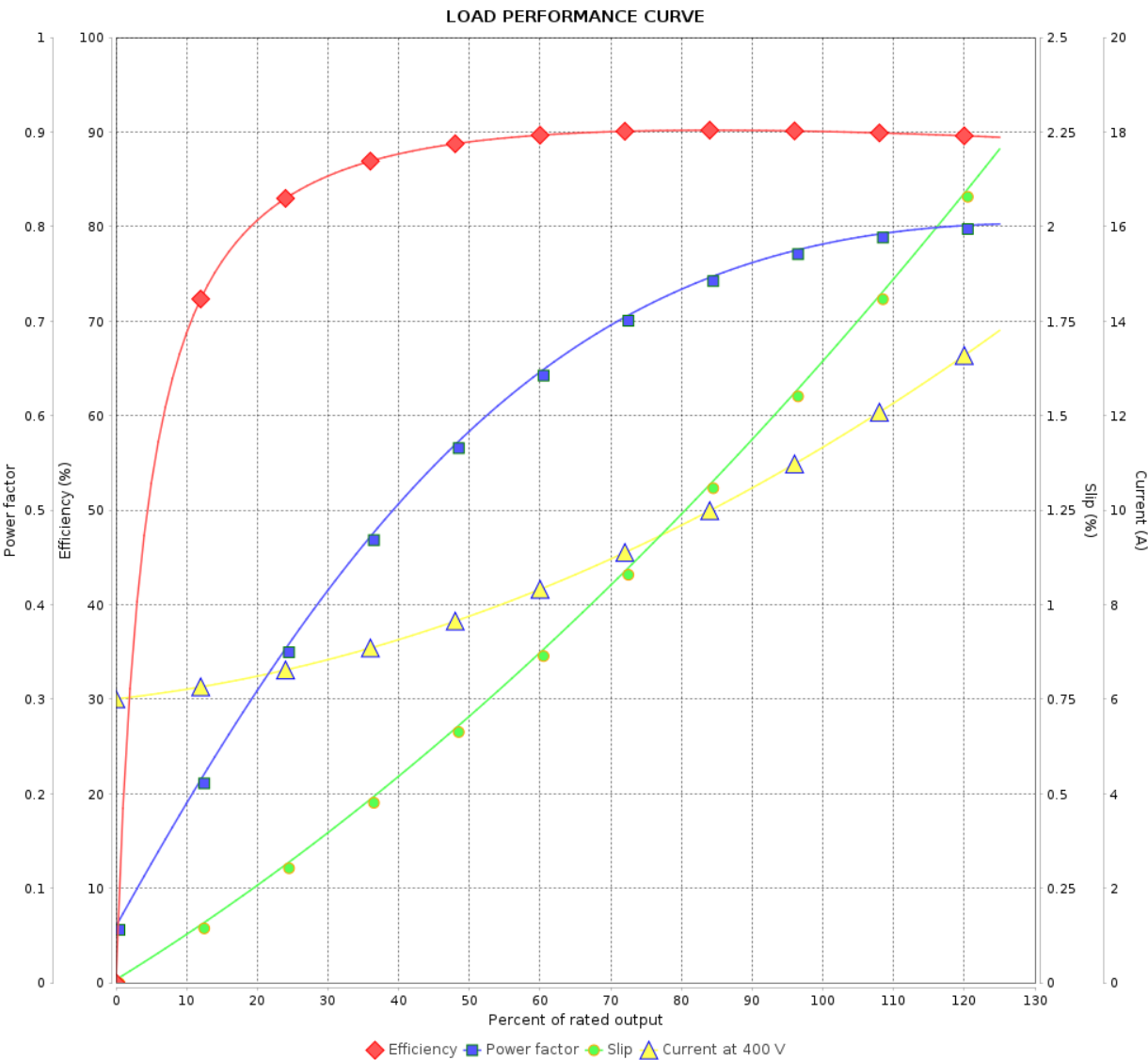
Three Phase Induction Motor - Squirrel Cage



Customer :

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Efficiency Three-Phase

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Performance : 400 V 50 Hz 4P IE3

Rated current : 11.0 A
LRC : 7.1
Rated torque : 3.69 kgfm
Locked rotor torque : 240 %
Breakdown torque : 340 %
Rated speed : 1470 rpm

Moment of inertia (J) : 0.0636 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

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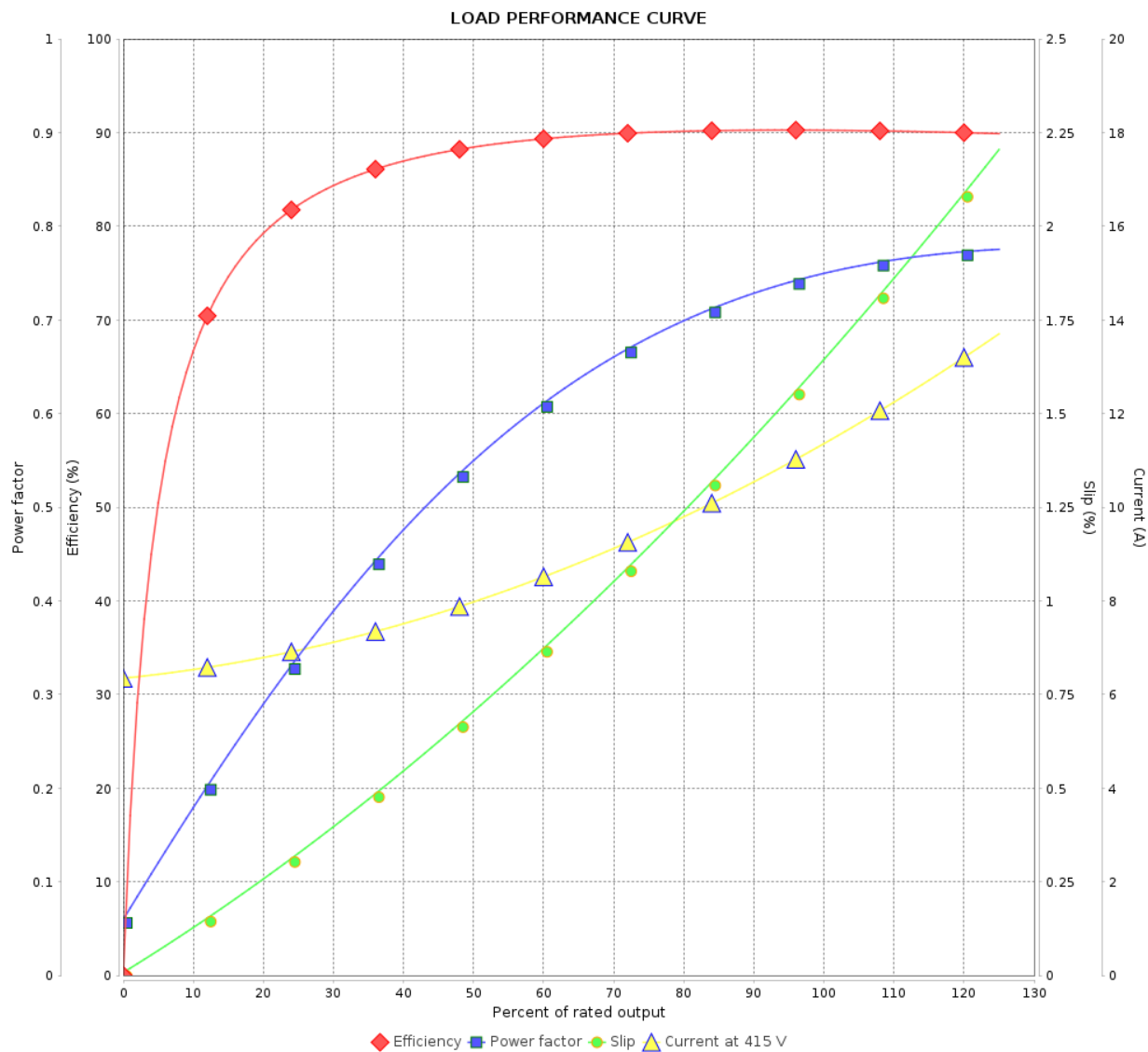
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium
Efficiency Three-Phase

Product code : 11431991



Performance : 415 V 50 Hz 4P IE3

Rated current : 10.9 A
LRC : 7.5
Rated torque : 3.69 kgfm
Locked rotor torque : 260 %
Breakdown torque : 360 %
Rated speed : 1470 rpm

Moment of inertia (J) : 0.0636 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

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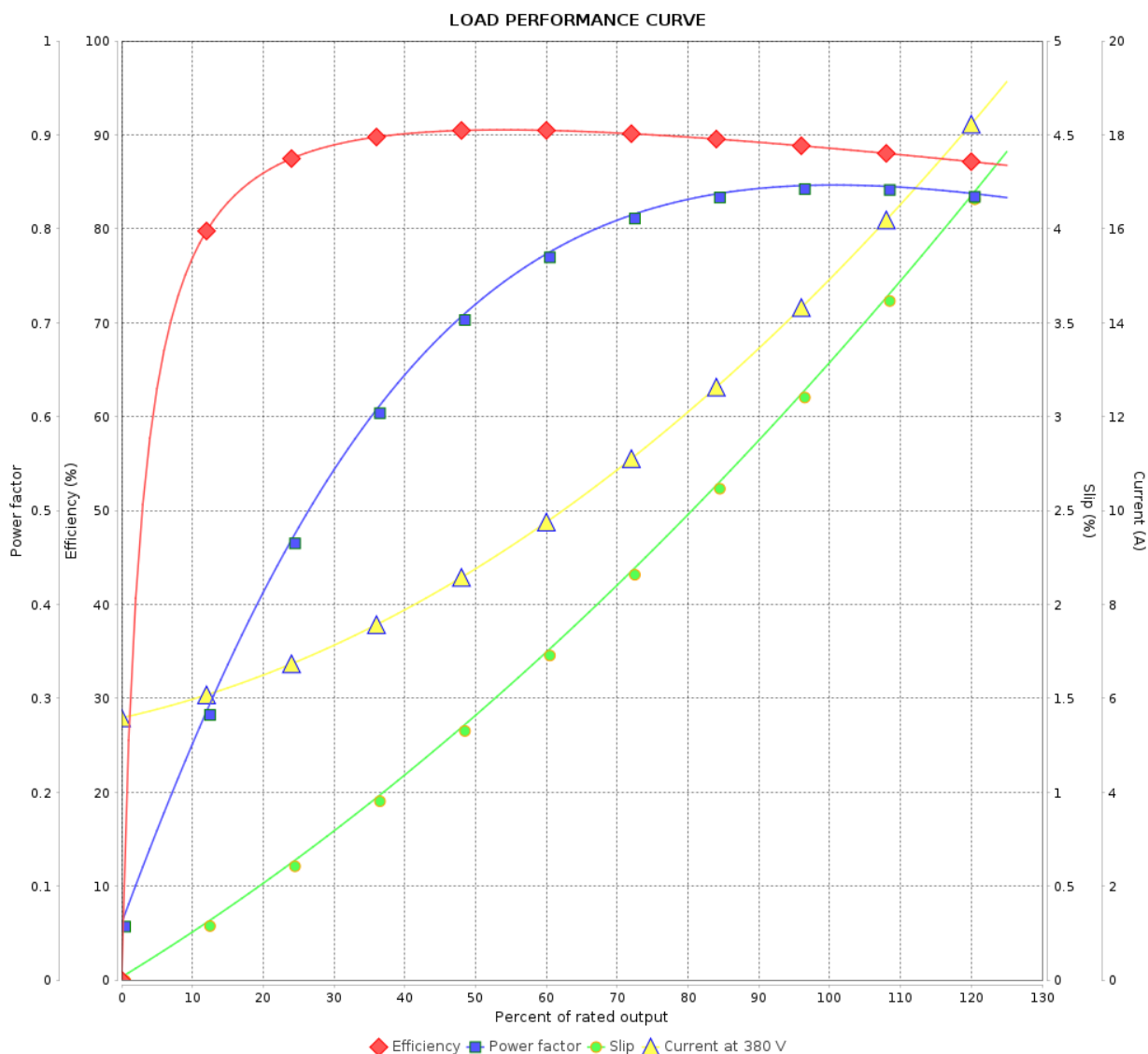
Three Phase Induction Motor - Squirrel Cage



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Performance : 380 V 50 Hz 4P IE1

Rated current : 15.0 A
LRC : 5.1
Rated torque : 5.01 kgfm
Locked rotor torque : 150 %
Breakdown torque : 220 %
Rated speed : 1450 rpm

Moment of inertia (J) : 0.0636 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

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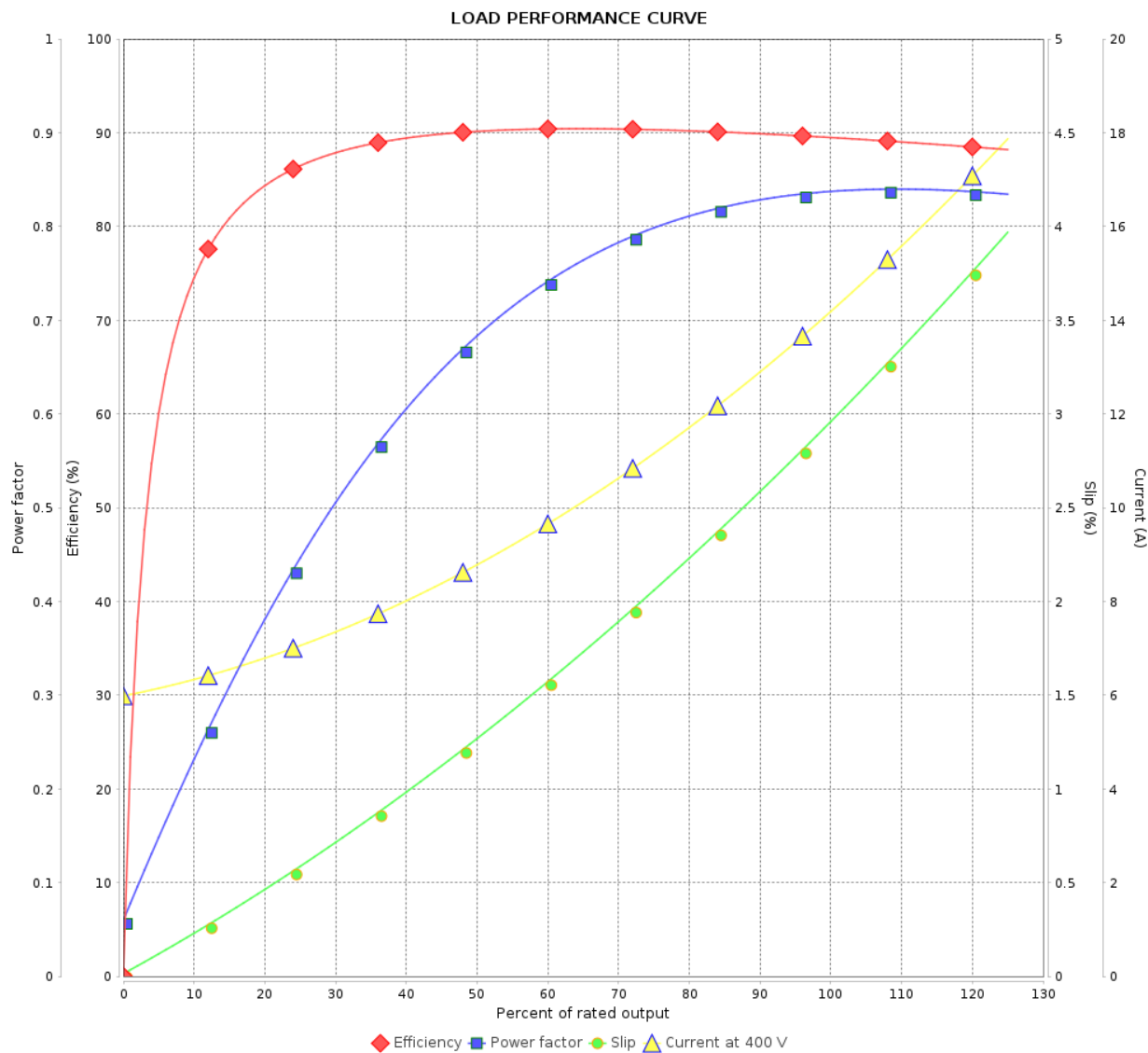
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Customer :

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Product code : 11431991



Performance : 400 V 50 Hz 4P IE2

Rated current : 14.2 A
LRC : 5.6
Rated torque : 4.99 kgfm
Locked rotor torque : 180 %
Breakdown torque : 250 %
Rated speed : 1455 rpm

Moment of inertia (J) : 0.0636 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

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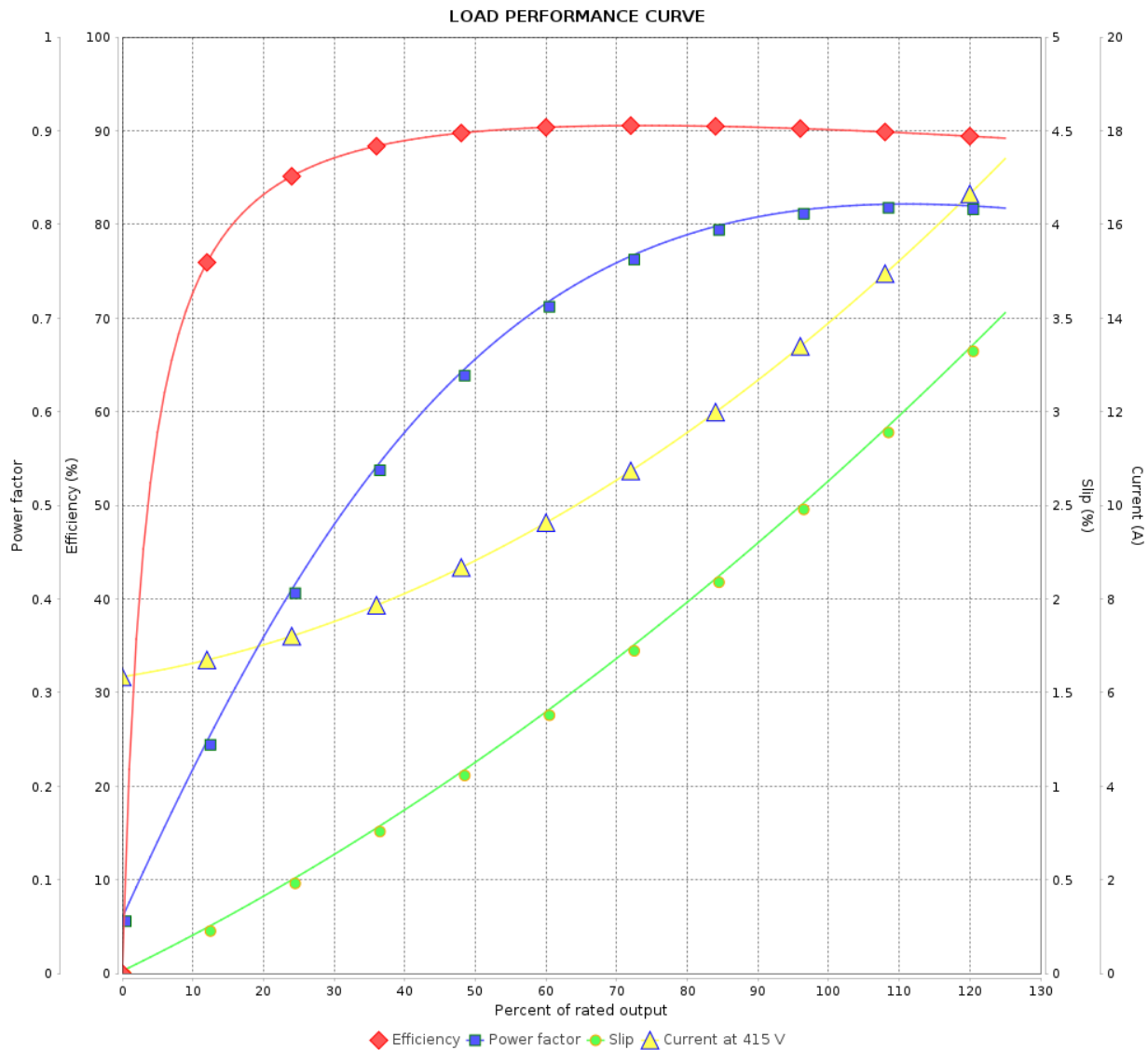
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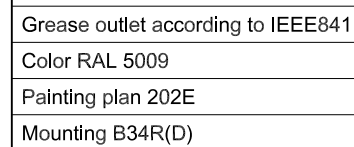
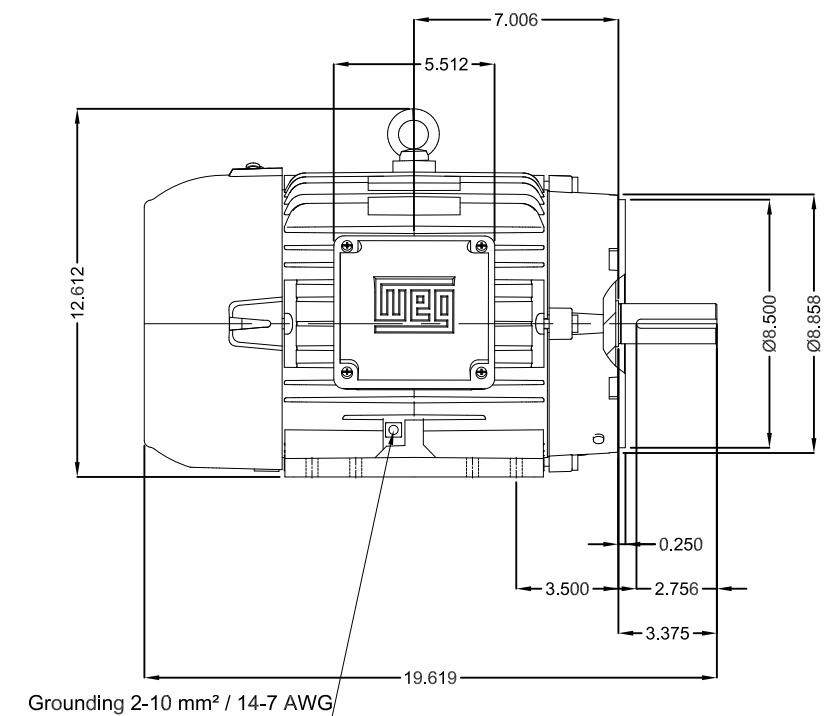


Performance : 415 V 50 Hz 4P IE2

Rated current : 13.8 A
LRC : 6.0
Rated torque : 4.97 kgfm
Locked rotor torque : 190 %
Breakdown torque : 270 %
Rated speed : 1460 rpm

Moment of inertia (J) : 0.0636 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

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ECM	LOC	SUMMARY OF MODIFICATIONS				EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	HYBRISUSER		THREE PH. MOTOR IEEE 841 W22 NEMA PREM. EFF. FRAME 213/5TC IP56 TEFC				PREVIEW WDD 00			
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